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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/566,200

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Rainer Schenk

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EXAMINER

WAITS, ALAN B

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/566,200	Applicant(s) SCHENK ET AL.	
	Examiner ALAN B. WAITS	Art Unit 3656	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07 December 2010.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-3,5,6,8-10 and 14 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3,5,6,8-10 and 14 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 07 December 2010 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Drawings

1. The drawings were received on 12/7/2010. These drawings are unacceptable.
2. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the “sealing disk engaging with a sealing disk” must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as “amended.” If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either “Replacement Sheet” or “New Sheet” pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

3. The amendment filed 12/7/2010 is objected to under 35 U.S.C. 132(a) because it introduces new matter into the disclosure. 35 U.S.C. 132(a) states that no amendment shall introduce new matter into the disclosure of the invention. The added material which is not supported by the original disclosure is as follows: The new drawing including the venting groove. The groove, as drawn, does not appear to be able to vent anything. Furthermore, the disclosure is silent as to the exact location of the groove relative to other elements such as the inner race.

Applicant is required to cancel the new matter in the reply to this Office Action.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claims 1-3, 5, 6, 8-10 and 14 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 1 and 3 recite the limitation "the sealing disk engaging with a sealing disk". It is unclear if there are two sealing disk recited.

Claims 1 and 3 recite the limitation "an annular groove" twice. It is unclear if these are the same two grooves or two separate elements.

Claim 1 and 3 recite the limitation "determined by the sealing disk". It is unclear to which sealing disk this limitation applies.

Claims 1 and 3 recite the limitation "a sealing disk positionally fixed on an outer circumference in a positively engaging and elastic manner in an annular groove of an

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outer bearing ring in a recess of an inner bearing ring". As claimed, the limitation seems to contradict itself.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claim 1-3, 5, 6, 8-10 and 14, as best understood, are rejected under 35 U.S.C. 103(a) as being unpatentable over Ishiguro USP 5133609 in view of Irwin USP 3627390.

Ishiguro discloses a similar device comprising:

Re clm 1 and 3

- An elastic sealing disk (1a, fig 6) running around with an outer bearing ring (2, fig 6) or a housing, having a reinforcement (10a) and positionally fixed with positive engagement in a receptacle or an annular groove (3)
- The sealing disk engaging with a sealing disk positionally fixed on an outer circumference in a positively engaging and elastic manner in an annular groove of an outer bearing ring in a recess (5) of an inner bearing ring (4) and being supported by means of a sealing edge on a wall (6)
- A first sealing lip (7a) is supported axially on an outer wall of the recess and a second sealing lip (9a) is assigned to an inner wall of the recess with play

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- A mass of the first sealing lip forming a center of mass, which, in a fitted position of the sealing arrangement, is offset in relation to a supporting line determined by the sealing disk in such a way that the centrifugal force acting at in clockwise direction crosswise to the axis of rotation of the bearing (fig 6)
- The first and second sealing lips being made to extend from a common sealing lip root of the sealing disk wherein
- A shoulder diameter of the inner bearing ring exceeds an inside diameter of the second sealing lip and a distance (a) between the inner wall of the recess and a free end of the second sealing lip is designed so that, even with a maximum rotational speed of the rolling-contact bearing, it ensures a distance $a > 0$ (fig 6)

Ishiguro does not disclose:

- The first sealing disk has on the outside, on a side facing the second sealing lip, a bead

Irwin teaches a bead (50, fig 1) facing away from the contact point (38, fig 1) for the purpose of allowing disengagement from contact with nonrotating elements so as to not adversely affect the operating characteristics of the device but does create a seal when the device is not operating (col 1, ln 33-37).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the teaching of Ishiguro and provide:

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- The first sealing disk has on the outside, on a side facing the second sealing lip, a bead

for the purpose of allowing disengagement from contact with nonrotating elements so as to not adversely affect the operating characteristics of the device but does create a seal when the device is not operating.

Re clm 2, Ishiguro further discloses

- A shoulder diameter of the inner bearing ring exceeds an inside diameter of a second sealing lip (fig 6)

Re clm 5

- The sealing lip is arranged in an axial offset to an end face of the sealing disk in a mounting position (fig 6)

Re clm 6

- The second sealing lip, obliquely inclined in relation to the inner wall and designed as a toe wall, is arranged axially offset in relation to the first sealing lip by a distance (c) (fig 6)

Re clm 8

- The recess of the bearing ring has walls of different heights
- The straightened to the rolling elements and showing a diameter excels and opposite wall showing a diameter as well as an inside diameter of the second sealing lip (fig 6)

Re clm 9

- The first sealing lip being provided with at least one venting groove in a region of the sealing edge (fig 6)

Re clm 10

- The venting groove of which is made to extend in a radial or inclined manner (fig 6)

8. Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ishiguro USP 5133609 in view of Irwin USP 3627390 as applied to claim 1 above, and further in view of Kajihara USP 5544963.

Ishiguro in view of Irwin disclose all the claimed subject matter as described above.

Ishiguro further discloses

Re clm 14

- The reinforcement, formed in the manner of a disk, of the sealing disk being encapsulated at least on one side by an elastic sealing material of the sealing arrangement and the reinforcement forming on the outside an angled-away flange (fig 6)

Ishiguro does not disclose:

- and on the inside being a leg inclined obliquely in the direction of the recess

Kajihara teaches a sealing disk comprising:

- on the inside being a leg (portion of 20 at bottom, fig 1) inclined obliquely in the direction of the recess

Since both Ishiguro and Kajihara teach a sealing disk, it would have been obvious to one of ordinary skill in the art at the time of the invention to substitute the reinforcement shape of Kajihara for the shape of Ishiguro and provide:

- On the inside being a leg inclined obliquely in the direction of the recess to achieve the predictable result of supporting the sealing lips.

Response to Arguments

9. Applicant's arguments filed 12/7/2010 have been fully considered but they are not persuasive.

Applicant argues the references do not show “a radial mounting position”, “the second sealing lip does not incline into the recess”. Applicant is arguing limitations not in the claims.

Applicant also argues that the references do not show “a venting groove”. Fig 6 of Ishiguro has a venting groove between the bead and arm of 7a.

Conclusion

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Aizawa USP 6457870 discloses a venting groove in a sealing lip (fig 2A and 2B; Col 3, ln 2-6).

11. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not

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mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to ALAN B. WAITS whose telephone number is (571)270-3664. The examiner can normally be reached on Monday through Friday 7:30 am to 5 pm EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Ridley can be reached on 571-272-6917. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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/Alan B Waits/

Examiner, Art Unit 3656

/Richard WL Ridley/

Supervisory Patent Examiner, Art Unit 3656